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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,012	10/24/2003	Alex C. Toy	1023-288US01	9367
28863	7590	06/05/2006	EXAMINER	
SHUMAKER & SIEFFERT, P. A. 8425 SEASONS PARKWAY SUITE 105 ST. PAUL, MN 55125			ROBERTS, DARIN	
			ART UNIT	PAPER NUMBER
			3762	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/693,012	TOY ET AL.	
	Examiner	Art Unit	
	Darin R. Roberts	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-18, 20-22, 27, 28, 30, 31, 33, 35-38 and 43-58 is/are rejected.
- 7) ☒ Claim(s) 5-9, 19, 23-26, 29, 32, 34 and 39-42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/14/05; 7/5/05; 7/2/04 and 5/23/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 20, 27, 29, 32, 33, & 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 20, 27, & 29, 32, 33, & 34 appear to be method claims, however they do not possess method steps.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1, 3, 4, 10 11, 13-15, & 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Carbunaru et al. (US 20040098068 A1).

In reference to ***claims 1, 3, 10, 11, 13 & 18***, the Carbunaru et al. patent teaches the use of a programmer (see pp. [0040]) as well as the use of radio linked communication which can act as a functional equivalent of the telemetry coil of the claimed invention (see pp. [0018]). Carbunaru et al. teaches the use of an amplifier that act as a functional equivalent of the fixed-frequency switching-mode boost converter of

claims 1 & 3, and is able to convert a battery voltage and a control circuit capable of inhibiting skipping (see pp. [0015] & pp. [0018]).

In reference to **claim 4**, the Carbutaru et al. patent teaches the use of a programmer that inherently possesses control circuitry. This circuitry of the Carbutaru et al. device possesses an amplifier along with a transistor coupled to transmit a the battery voltage to the boost amplifier when the transistor is ON, wherein the transistor turns OFF when the battery voltage exceeds a threshold voltage (see pp. [0084] & pp. [0085]).

In reference to **claim 10**, the programmer of the Carbutaru et al. device possesses a coil/antenna that is mounted internally within a housing associated with the controller (see pp. abstract & pp. [0048] & fig. 3B)

In reference to **claim 13**, the Carbutaru et al. device possesses a programmer within which an amplifier exists an amplifier. This amplifier is capable of limiting the voltage the level of voltage applier by the amplifier (see pp. [0018]).

In reference to **claims 14 & 15**, the Carbutaru et al. publication teaches the use of a rechargeable battery. The rechargeable battery also acts as a functional equivalent of AAA battery cells, AA battery calls, or D battery cells (see abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 11, 12, 16, 18, 20, 21, 22, 27, 28, 30, 31, 35-38, 43-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carbunaru et al. (US 20040098068 A1) in view of Hwang et al. (US 6469914 B1).

In reference to **claims 1, 2, 11, 16, 18, 20, 21, 22, 27, 28, 30, 35-38, 43, 44, 46, 51, 52, & 54**, the Carbunaru et al. patent teaches the use of a programmer, capable of being held in one's hand, (see pp. [0040] & fig. 4B) as well as the use of radio linked communication which can act as a functional equivalent of the telemetry coil of the claimed invention (see pp. [0018]). Carbunaru et al. teaches the use of an amplifier that acts as a functional equivalent of the fixed-frequency switching-mode boost converter of claims 1 & 3, and is able to perform DC-DC conversion (see pp. [0015] & pp. [0018]), since no criticality was given to the use of a fixed-frequency switching-mode boost converter it appears that any amplifying means would perform the same task. However

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the Carbunaru et al. patent does not teach the use of circuitry capable of inhibiting pulse skipping.

The Hwang et al. patent teaches the use of control circuitry to inhibit pulse skipping (see abstract, claim 5, & lead lines 20-30), as well as the transmission of voltage values to a DC-DC converting device (see column 1, lead lines 39-45). Hwang et al also teaches turning off the transistor when the voltage exceeds a certain value (see column 2, lead lines 1-13), and the inhibition of pulse skipping by an amplifier when the transistor is turned off is an inherent result of turning off the transistor.

It is also quite common to use such control circuitry in the elimination or at least the reduction of noise and/or undesirable pulses, and thus it would have been obvious to one of ordinary skill in the art to incorporate such circuitry to reduce the occurrence of unnecessary pulses and in turn hinder the occurrence of unnecessary stimulation.

In reference to **claims 12, 18, 31, 45, 47, 48, 50, 53, 55, 56, & 58**, Carbunaru et al. and Hwang et al. do not teach a programmer wherein the threshold voltage is approximately 2.2-3.2 volts however it would have been obvious to one of ordinary skill in the art to adjust the voltage parameters to optimize stimulation.

The Carbunaru et al. publication also teaches the use of a rechargeable battery (see abstract). The rechargeable battery also acts as a functional equivalent of AAA battery cells, AA battery calls, or D battery cells (see abstract).

Thus it would have been obvious to one of ordinary skill in the art to use AAA battery cells, AA battery calls, or D battery cells to supply an alternative source of energy.

In reference to **claim 49, 57**, the both the Carbinaru et al. and Hwang et al. references do not explicitly teach the use of a handheld programming device, however handheld programmers are quite common to the art, and thus it would have been obvious to one of ordinary skill in the art to incorporate the use of a handheld programmer to provide the user or his/her physician with the opportunity to adjust parameter at multiple locations.

Allowable Subject Matter

Claim 5-9, 23-26, 29, 32, 34, 39-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The examiner wishes to cite Daly et al. (US 4408608), Baker (US 4550370) and Alferness et al. (US 4066086) as a result of their use of pulse skipping in conjunction with implantable devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darin R. Roberts whose telephone number is (571) 272-5558. The examiner can normally be reached on 7:30am to 4:00pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-9900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Darin Roberts
Patent Examiner
Art Unit 3762

D. R.


Jeffrey Jastrzab
Primary Examiner
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5/29/06